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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,287	10/09/2003	Krishna Balachandran	29250-001082/US	9239

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HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 8910
Reston, VA 20195

EXAMINER

LAM, DUNG LE

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/681,287	BALACHANDRAN ET AL.	
	Examiner	Art Unit	
	Dung Lam	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/8/06 has been entered.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1-3, 5, 7-8, 10-11 rejected under 35 U.S.C. 102(a) as being anticipated by **Sinnaraja** (US Pub No. 2003/0114177).

2. Regarding **claim 1**, **Sinnaraja** teaches a method triggering generation of a registration of a mobile station in a network supporting broadcast multicast services, comprising triggering generation of a registration message in response to a change triggering a generation of a registration following a change in frequency and flow (At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0068-0071], Fig. 3, [0082]), from a first frequency to a second frequency and first flow to a second flow, that is monitored by the mobile station,

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if the second frequency is not known to the network based on flow identifier information previously registered by the mobile station with the network (para. 64, 66, 70-71, 82).

3. Regarding **claim 5**, **Sinnaraja** teaches a method of paging a mobile station comprising paging a mobile station on a given frequency in response to a registration message received from the mobile station indicating the mobile station's presence on that given frequency (para. 59, 79 and 81), wherein said registration message is generated based on a change in frequency, from a first frequency to a second frequency, that is monitored by the mobile station at time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0068-0071], Fig. 3, [0082]), if the second frequency is not known to the network based on flow identifier information previously registered by the mobile station with the network (para. 64, 66, 70-71 and 82).

4. Regarding **claim 10**, **Sinnaraja** teaches a method of determining a frequency of broadcast multicast content being monitored by a mobile station in a wireless network, comprising: generating, at the mobile station, a registration message in response to a change in flow and frequency At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0068-0071], Fig. 3, [0082]), if the frequency monitored by the mobile station that is not known to the network based on flow identifier information previously registered by the mobile station with the network (para. 62 and 63); and determining an updated frequency being monitored by the mobile station from the generated registration message (para. 64, 66, 70-71 and 82) .

5. Regarding **claims 2, 7, and 11**, **Sinnarajah** further teaches the first flow identifier information is a broadcast-multicast service flow ID that the mobile station had previously registered with the network ([0070-0071]).
6. Regarding **claims 3 and 8**, **Sinnarajah** teach that the first or second frequency monitored by the mobile station is a frequency of broadcast multicast content being received by the mobile station ([0044-0045]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims **1-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over SWG23 BCMCS ADHOC: "Signaling Support for 1x BCMCS", 28 August 2003, pages 1-53 (simply referred to as "**3G-1x-BCMCS**") in view of **Sinnaraja** (US Pub No. 2003/0114177).
8. Regarding **claim 1**, **3G-1x-BCMCS** teaches a method of triggering registration of a mobile station in a network supporting broadcast multicast services (p.18, 19, 26, 28, 30) comprising: triggering generation of a registration message in response to a change in frequency, from a first frequency to a second frequency (p. 26, lines 8 – 10 & lines 35 – 39, p. 28 lines 16-22 & p. 30 lines. 27 & 31-35) that is monitored by the mobile station

(section 2.6.2.9.3, p. 20 lines 4-14), if the second frequency is not known to the network based on a first flow identifier (BCMCS_FLOW_ID) information previously registered by the mobile station with the network (p. 19 lines 21-29; p. 26 lines 8 – 10 & lines 35 - 39).

However, **3G-1x-BCMCS** does not explicitly teach that the triggering of generation of a registration is based on a change in frequency and a change in flow, from a first flow to a second flow and from first frequency to second frequency. In an analogous art, **Sinnarajah** teaches the concept of triggering a generation of a registration following a change in frequency and flow, from a first frequency to a second frequency and first flow to a second flow. (At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0066-0071], Fig. 3, [0082]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to trigger a registration message not only based on a change in frequency as taught by **3G-1x-BCMCS's** but also based on a change in flow and frequency as taught by **Sinnarajah's** since this combination makes the registration process more robust and efficient by taking into account of the possibility of a combination of change in flow and frequency.

9. Regarding **claim 5**, **3G-1x-BCMCS** teach a method of paging a mobile station in a wireless network comprising: paging a mobile station on a given frequency based on a registration message received from the mobile station indicating the mobile station's presence on that given frequency (p. 20 lines 4-9) and a registration is triggered based on a change from a first to a second frequency, if the second frequency is not known to

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the network based on flow identifier (BCMCS_FLOW_ID) information previously registered by the mobile station with the network (p. 19 lines 21-29; p. 26 lines 8 – 10 & lines 35 – 39); However, **3G-1x-BCMCS** does not explicitly teach that the triggering of generation of a registration is based on a change in frequency and a change in flow, from a first flow to a second flow and from first frequency to second frequency. In an analogous art, **Sinnarajah** teaches the concept of triggering a generation of a registration following a change in frequency and flow, from a first frequency to a second frequency and first flow to a second flow. (At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0066-0071], Fig. 3, [0082]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to trigger a registration message not only based on a change in frequency as taught by **3G-1x-BCMCS's** but also based on a change in flow and frequency as taught by **Sinnarajah's** since this combination makes the registration process more robust and efficient by taking into account of the possibility of a combination of change in flow and frequency.

10. Regarding **claim 10**, **3G-1x-BCMCS** teaches a method of determining a frequency of broadcast multicast content being monitored by a mobile station in a wireless network (p. 20 lines 8-9), comprising: generating, at the mobile station, a registration message based on a change in frequency monitored by the mobile station that is not known to the network based on flow identifier information previously registered by the mobile station with the network (p. 20 lines 4-8); and determining an updated frequency being monitored by the mobile station from the generated

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registration message (p. 20 lines 8-9). However, **3G-1x-BCMCS** does not explicitly teach that generation of a registration is based on a change in frequency and a change in flow, from a first flow to a second flow and from first frequency to second frequency. In an analogous art, **Sinnarajah** teaches the concept of triggering a generation of a registration following a change in frequency and flow, from a first frequency to a second frequency and first flow to a second flow. (At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0068-0071], Fig. 3, [0082]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to trigger a registration message not only based on a change in frequency as taught by **3G-1x-BCMCS's** but also based on a change in flow and frequency as taught by **Sinnarajah's** since this teaching makes the registration process more robust and efficient by also taking into account of the possibility of a combination of change in flow and frequency.

11. Regarding **claims 2, 7, and 11**, **3G-1x-BCMCS** and **Sinnarajah** teach a method wherein **3G-1x-BCMCS** further teaches the first flow identifier information is a broadcast-multicast service flow ID (p. 3 line 7) that the mobile station had inherently previously registered with the network (p. 26, lines 8 – 10 & lines 35 - 39).

12. Regarding **claims 3 and 8**, **3G-1x-BCMCS** and **Sinnarajah** teach that the first or second frequency monitored by the mobile station is a frequency of broadcast multicast content being received by the mobile station (**3G-1x-BCMCS**, p. 19 lines 21-29).

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13. Regarding **claim 4, 9 and 13, 3G-1x-BCMCS and Sinnarajah** teach teaches a method, wherein triggering generation of the registration message includes the mobile station:

changing from the first frequency to the second frequency (**3G-1x-BCMCS**, p. 19 lines 21-29);

determining whether presence of the mobile station's monitoring of the second frequency is known to the network, based on a broadcast-multicast service flow identifier that the mobile station previously registered with the network (**3G-1x-BCMCS**, p. 19 lines 5-7);

and transmitting a registration message to the network, if the second frequency does not correspond to a known frequency based on the broadcast-multicast service flow identifier (**3G-1x-BCMCS**, p. 19 lines 21-29).

14. Regarding **claim 12, 3G-1x-BCMCS and Sinnarajah** teach a method of claim 10, wherein the frequency monitored by the mobile station is contained in the registration message (p. 28 lines 16-22).

Response to Arguments

Applicant's arguments filed 12/1/06 have been fully considered but they are not persuasive.

Applicant argues that, "the generation of a registration message is not triggered in response to a change in flow and frequency". The examiner respectfully disagrees.

Sinnaraja clearly teaches that when the subscriber station is no longer interested in monitoring HSBS channel 302a (first flow) which is on frequency fx (first frequency) and wants tune in to HSBS channel 302c (second flow) which is on frequency fy (second frequency), the subscriber tunes to frequency fy and sends a broadcast service registration ([0070-0071]). This registration clearly occurs due to or in response to a change of both frequency and flow.

Applicant further argues that if the network has a list of frequencies the mobile station is subscribed to then Sinnaraja can not teach "if the second frequency is not known to the network based on a first flow identifier information previously registered by the mobile station with the network" as recited in claim 1. The examiner respectfully disagrees. The list of frequency that the applicant is referring to is a logical to physical mapping between a HSBS channel ID and the frequency. The base station has to rely on the Page_set to determine the frequency based on the registered HSBS_ID ([0064]). At time T3 the Page_Set is {2,1, fz} and at time T4 the base station changes the Page_Set to {3, 2,1,fz}. This clearly shows that flow_ID 3 which corresponds to frequency fx was not known to the network from previous registration ([0070-0071]).

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Thus, Sinnaraja does teach the condition "if the second frequency is not known to the network based on a first flow identifier information previously registered by the mobile station with the network".


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL



LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER